

Appl. No. 10/671,359
Amdt. dated August 24, 2007
Reply to Office action of June 29, 2007

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Please insert new claims 21, 22, 23, 24, 25 which are revisions of prior claims 1, 5, 7, 9 and 12 respectively.

Please cancel prior claims 1 - 20.

Listing of Claims:

1. (canceled)
2. (canceled)
3. (canceled)
4. (canceled)
5. (canceled)
6. (canceled)
7. (canceled)
8. (canceled)
9. (canceled)
10. (canceled)
11. (canceled)
12. (canceled)
13. (canceled)
14. (canceled)
15. (canceled)
16. (canceled)
17. (canceled)

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18. (canceled)

19. (canceled)

20. (canceled)

21. (new) A method for improving the performance of a database including at least one set of linked entities, wherein the at least one set of linked entities contains a plurality of conceptual entities, each of the conceptual entities including a plurality of data values which are distributed amongst the plurality of the conceptual entities, comprising the steps of:

- (i) determining an average read/write ratio of the plurality of data values distributed amongst the at least one set of linked entities in the database;
- (ii) comparing the average read/write ratio of the database to a predetermined critical read/write ratio; and
- (iii) if the average read/write ratio is greater than the critical read/write ratio, then performing the following method steps:
 - (iiia) defining an additional entity table in the database; and
 - (iiib) storing in the additional entity table an aggregation of said plurality of data values representing an aggregation of at least one of the plurality of conceptual entities, whereby the information defining the conceptual entity is obtained by performing a single read operation on the additional entity table.

22. (new) A method in accordance with Claim 21, wherein the step (ii) for predetermining the critical read/write ratio includes the further steps of:

- (iia) providing data with regard to the time taken to perform a read operation and a write operation on a first implementation of the said database;
- (iib) providing data with regard to the time taken to perform a read operation and a write operation on a second implementation of the said database;

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- (iic) calculating a read time difference between the time taken to perform a read operation on said first implementation of said database and on said second implementation of said database;
- (iid) calculating a write time difference between the time taken to perform a write operation on said first implementation of said database and on said second implementation of said database; and
- (iie) calculating the ratio between the read time difference and the write time difference to determine the critical read/write ratio for the database.

23. (new) A system for modifying a database, comprising:

- (a) means for providing at least one set of linked entities in the said database, wherein the said at least one set of linked entities contains a plurality of conceptual entities, each of the conceptual entities including a plurality of data values which are distributed amongst the plurality of conceptual entities;
- (b) means for determining an average read/write ratio of the plurality of data values distributed amongst the at least one set of linked entities in the database;
- (c) means for comparing the average read/write ratio of the database to a predetermined critical read/write ratio;
- (d) determining means arranged, if the average read/write ratio is greater than said the critical read/write ratio, to invoke;
 - (d1) means for defining an additional entity table in addition to the at least one set of linked entities;
 - (d2) storing means arranged to store, in said additional entity table, the aggregation of said plurality of data values representing an aggregation of at least one said plurality of conceptual entities; and
 - (d3) reading means enabled to read said aggregation of said plurality of data values by performing a single read operation on said additional entity table to return the information defining at least one conceptual entity.

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24. (new) A system in accordance with claim 23, wherein said means (c) includes means to establish a predetermined critical read/write ratio, wherein said means to establish said predetermined critical read/write ratio further includes::

(ca) means for providing data with regard to the time taken to perform a read operation and a write operation on the data values which are distributed amongst the plurality of entities;

(cb) means for providing data with regard to the time taken to perform a read operation and a write operation on said additional entity table;

(cc) means for calculating a read time difference between the time taken to perform a read operation on the data values which are distributed amongst the plurality of entities and on said additional entity table;

(cd) means for calculating a write time difference between the time taken to perform a write operation on the data values which are distributed amongst the plurality of entities and on said additional entity table; and

(ce) means for calculating the ratio between said read time difference and said write time difference to determine the critical read/write ratio for the database.

25. (new) A computer readable medium incorporating a computer program including at least one instruction which, when loaded on a computing system, causes the computing system to perform the method steps of Claim 21.